In the Claims:

1. [Original] A method of furnishing concentrated hydrogen peroxide vapor to an article comprising the steps of:

placing the article into a chamber containing an inner atmosphere;

placing a solution comprising hydrogen peroxide and water into fluid communication with the chamber, said solution having a ratio of hydrogen peroxide to water;

vaporizing the solution in the inner atmosphere to form water vapor and hydrogen peroxide vapor;

selectively drawing water vapor from the chamber to increase a ratio of hydrogen peroxide to water in the chamber; and

contacting the article with the hydrogen peroxide vapor.

2. [Original] A method according to claim 1 wherein the ratio of hydrogen peroxide vapor to water vapor after the step of selectively drawing water vapor from the chamber exceeds the ratio of hydrogen peroxide to water in said solution.

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3. [Original] A method according to claim 1 wherein the ratio of hydrogen peroxide to water, by weight, after the step of selectively drawing water vapor from the chamber exceeds 3 to 1.

4. [Original] A method according to claim 3 wherein the ratio of hydrogen peroxide to water in said solution, by weight, is less than 3 to 1.

5. [Original] A method according to claim 3 wherein the ratio of hydrogen peroxide to water in said solution, by weight, is less than 3:2.

6. [Original] A method according to claim 3 wherein the ratio of hydrogen peroxide to water, by weight, after the step of selectively drawing water vapor from the chamber exceeds 4 to 1.

7. [Original] A method according to claim 1 wherein the step of selectively drawing water vapor from the chamber comprises placing said solution within a diffusion restricted environment in fluid communication with the chamber during the step of vaporizing the solution.

8. [Original] A method according to claim 7 wherein the diffusion restricted environment is more diffusion restricted during the step of selectively drawing water vapor from the chamber than during a portion of the step of vaporizing the solution during which the hydrogen peroxide is vaporizing at a faster rate than the water.

9. [Original] A method according to claim 7 wherein the water vapor is drawn from the chamber through one or more exhaust ports and wherein the one or more exhaust ports are physically remote from the diffusion restriction.

10. [Original] A method according to claim 1 wherein the step of selectively drawing water vapor from the chamber comprises the steps of controlling the temperature and pressure of the solution during the step of vaporizing the solution to enhance vaporization of the water from solution versus vaporization of hydrogen peroxide and extracting at least a portion of the water vapor from the chamber.

11. [Original] A method according to claim 1 wherein the step of selectively drawing water vapor from the chamber comprises the steps of maintaining the solution at a pressure below the vapor pressure of the water in the solution and above the vapor pressure of the hydrogen peroxide in the solution.

12. [Original] A method according to claim 1 wherein the solution is vaporized by pumping a portion of the atmosphere out of the chamber to lower the pressure of the chamber at a rate selected to control removal of the water and hydrogen peroxide from the solution so as to concentrate the hydrogen peroxide remaining in the chamber.

13. [Original] A method according to claim 1 wherein the temperature of the solution during the vaporizing step is held below the temperature of the atmosphere in the chamber whereby to increase the vapor pressure of the water in the solution relative to the hydrogen peroxide in the solution whereby to enhance vaporization of the water from the solution in preference to vaporizing the hydrogen peroxide from the solution.

14. [Original] A method according to claim 10 wherein the temperature of the atmosphere in the chamber is above room temperature and the temperature of the solution during the vaporizing step is at least 10° C below the temperature of the atmosphere in the chamber.

15. [Original] A method according to claim 13 wherein the solution is vaporized in a vaporizer which is in fluid communication with the chamber and wherein the vaporizer is thermally isolated from the chamber.

16. [Original] A method a ccording to claim 1 and further comprising the steps of controlling the temperature and pressure of the solution during a least a first portion of the vaporizing step so as to selectively vaporize water from the solution and concentrate hydrogen peroxide therein to form a concentrated solution and during a second portion of the vaporizing step raising the temperature of the concentrated solution and vaporizing the concentrated solution.

17. [Original] A method according to claim 1 and further comprising the steps of controlling the temperature and pressure of the solution during a least a first portion of the vaporizing step so as to selectively vaporize water from the solution and concentrate hydrogen peroxide therein to form a concentrated solution and during a second portion of the vaporizing step not withdrawing atmosphere from the chamber.

18. [Original] A method according to claim 1 and further comprising the step of drying the chamber prior to the step of vaporizing the solution.

19. [Currently Amended] A method according to claim [12] 18 wherein the step of drying the chamber comprises pumping a portion of the atmosphere out of the chamber.

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20. [Currently Amended] A method according to claim [12] 18 wherein the step of drying the chamber comprises applying energy to excite molecules of liquid water within the chamber into the gaseous or plasma state of matter and pumping a portion of the atmosphere out of the chamber.